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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,072	05/30/2001	L. Scott Bloebaum	4015-948	6752

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COATS & BENNETT, PLLC
P O BOX 5
RALEIGH, NC 27602

EXAMINER

SOBUTKA, PHILIP

ART UNIT	PAPER NUMBER
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2684

DATE MAILED: 07/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.



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2

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Commissioner for Patents

Office Action Summary

Application No.

09/870,072

Applicant(s)

BLOEBAUM ET AL.

Examiner

Philip J. Sobutka

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-29 is/are allowed.
- 6) ☒ Claim(s) 1, 10, 11 and 20 is/are rejected.
- 7) ☒ Claim(s) 2-9 and 12-19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1,10,11,20 are rejected under 35 U.S.C. 102(e) as being anticipated by Watters et al (US 6,230,018).

Consider claims 1,11. Watters teaches a method of performing synchronization comprising: obtaining predetermined TDOA values for a plurality of navigation satellite signals (Watters see especially figs 9,10); performing synchronizations on one satellite signal and calculating the synchronization for at least one remaining satellite signal based on the predetermined TDOA values (Watters see especially fig 11). Note that in order to synchronize to the satellite codes would require synchronizing to the bit edges.

As to claims 10,20, note that the predetermined TDOA values for the signals are retrieved from an associated memory (Watters, see especially fig 7, col 7, lines 52-64).

Allowable Subject Matter

3. Claims 21-29 are allowed.

Consider claim 21. The nearest prior art as shown in Watters fails to teach a wireless system comprising: at least one mobile terminal containing a position estimator

and periodically transmitting RF signals; and a satellite navigation server to transmit relative timing information between satellite navigation signals to the mobile via a radio access network, wherein the relative timing information is used by the mobile terminal to overcome interference from the periodic transmission of RF signals in order to perform bit edge synchronization.

Consider claim 25. The nearest prior art as shown in Watters fails to teach a wireless system mobile terminal comprising: a transceiver for establishing two way wireless communications via periodic RF transmissions; a position estimator receiving satellite navigation signals, the signals at least partially obscured by the periodic RF transmissions; a controller performing bit edge synchronization on the satellite navigation signal in the presence of the periodic RF transmission by the use of predetermined satellite navigation signal information.

4. Claims 2-9,12-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Consider claim 2. The nearest prior art as shown in Watters fails to teach the method of claim 1, wherein performing bit edge synchronization on the satellite signal comprises: identifying at least one TDOA value between the duration of the periodic interference and the period of the periodic interference less the duration, the TDOA value associated with a first and second satellite signal; performing bit edge synchronization on the first satellite signal; and if bit edge synchronization on the first

satellite signal fails due to the periodic interference , performing bit edge synchronization on the second satellite signal.

Consider claims 3,13. The nearest prior art as shown in Watters fails to teach the method of claims 1 and 11 respectively, wherein performing bit edge synchronization on the satellite signal comprises: ranking the TDOA values into a list; iteratively performing bit edge synchronization on each satellite signal according to the TDOA list until bit edge synchronization on one satellite signal is successful.

Consider claims 6,16. The nearest prior art as shown in Watters fails to teach the method of claims 1, and 11, respectively, wherein obtaining predetermined TDOA values for the plurality of navigation satellites signals comprises receiving information necessary to determine the TDOA values via an associated wireless communications mobile terminal.

Consider claim 12. The nearest prior art as shown in Watters fails to teach the method of claim 11, wherein the first and second navigation satellite signal are selected from among a plurality of navigation satellite signal by identifying a TDOA value between the duration of the periodic interference and the period of the periodic interference less the durations, the TDOA value associated with the first and second satellite signals.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Soliman et al (US 6,188,354) and Kuwahara et al (US 6,704,547) have been cited to show the use of TDOA data in determining mobile location.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip J. Sobutka whose telephone number is 703-305-4825. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 703-308-7745. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

Philip Sobutka

Pjs
June 24, 2004


NAY MAUNG
SUPERVISORY PATENT EXAMINER